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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,648

09/19/2003

Martin Lund

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MCANDREWS HELD & MALLOY, LTD
500 WEST MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER

PHAN, MAN U

ART UNIT

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2419

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/665,648	Applicant(s) LUND ET AL.	
	Examiner Man Phan	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to applicant's 03/24/2008 communications in the application of Lund et al. for a "Method and system to provide blade server load balancing using spare link bandwidth" filed 09/19/2003. This application is a CIP of 10/454,012 filed 06/04/2003, and is a CIP of 10/454,273 filed 06/04/2003 is now U.S. Patent #6,859,154. Claims 1-25 are pending in the application.

2. The applicant should use this period for response to thoroughly and very closely proof read and review the whole of the application for correct correlation between reference numerals in the textual portion of the Specification and Drawings along with any minor spelling errors, general typographical errors, accuracy, assurance of proper use for Trademarks TM, and other legal symbols @, where required, and clarity of meaning in the Specification, Drawings, and specifically the claims (i.e., provide proper antecedent basis for "the" and "said" within each claim). Minor typographical errors could render a Patent unenforceable and so the applicant is strongly encouraged to aid in this endeavor.

Claim Rejections - 35 USC ' 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 24 recites limitations "the inter packet gap" and claim 25 recites "the control words" in line 2.

There is insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-3, 12-15, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paranchych et al. (US#6,810,018) in view of Hsu et al. (US#7,443,857).

With respect to claims 13-15 and 23, the references disclose a novel system and method for controlling the capacity utilization of the servers to perform blade server load balancing functions, according to the essential features of the claims. Paranchych et al. (US#6,810,018) discloses in Fig. 3 a block diagram illustrated a system and method for controlling the capacity utilization of the servers comprising a blade server manager (*access terminal AT*), two or more blade servers (*access points APs*), interfaces for communicating between the blade server manager (*access terminal AT*) and each blade server (*access points APs*)(Col. 2, lines 1 plus);

Art Unit: 2419

wherein the blade server manager (*access terminal AT*) allocates data to each blade server (*access points APs*) based on the capacity utilization data transmitted by each blade server (*access points APs*) to the blade server manager (*access points APs*)(See Fig. 4a and the Abstract; Col. 2, lines 39 plus and Col. 3, lines 38 plus).

In the same field of endeavor, Hsu et al. (US#7,443,857) teaches in Fig. 2 a flow chart illustrated a method and system for connection routing based on link capacity utilization, in which at block 210, a desired link utilization limit is included in a virtual circuit connection setup message. The link utilization limit indicates a maximum utilization for links to be used for the virtual circuit connection. In block 220, the link utilization limit is accessed by a node of a network. In block 230, the link utilization limit is compared to the utilization of a link coupled to the node. The comparison of the link utilization limit can be to a current utilization of the link. Alternatively, the link utilization limit can be to a current utilization of the link plus an additional bandwidth required for the virtual circuit connection (Col. 6, lines 15 plus).

With respect to claims 1-3, 12, they are method claims corresponding to the apparatus claims 13-15, 23 as discussed in paragraph above. Therefore, claims 1-3, 12 are analyzed and rejected as previously discussed with respect to claims 13-15, 23.

One skilled in the art of communications would recognize the need for a load balancing in a multi server platform utilizing link capacity utilization, and would apply Hsu's novel use of the link capacity utilization data into Paranchych's system and method for load balancing function. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Hsu's connection routing based on link utilization into

Art Unit: 2419

Paranchych's method and apparatus for load balancing in CDMA/HDR networks with the motivation being to provide a system and method to provide blade server load balancing.

6. Claims 4-11, 16-22, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paranchych et al. (US#6,810,018) in view of Hsu et al. (US#7,443,857) as applied to the claims above and further in view of Garnett et al. (US#7,032,037).

Regarding claims 16-19, Garnett et al. (US#7,032,037) provide a server blade comprising at least one processor and at least one communications port. The communications port may be operable to receive an information message and the processor may be operable to compare the received information message to a predetermined set of possible destinations to select a destination. The communications port may be further operable to transmit the information message to the selected destination. The server blade can be configured as a field replaceable unit. This arrangement provides a load balancer module configured to take the place of a standard server blade within a modular computer system to provide a load balancing service to that modular computer system (See Figs. 1 & 15; Col. 2, lines 5 plus). While blade server technology changed the way in which servers were utilized and managed, on the client side (e.g., at the desktop level), things remained essentially the same. That is, each workstation still consisted of a desktop PC coupled, wirelessly or via Ethernet cables, to the "server farm" where the blade servers were stored. Furthermore, blade servers must integrate all their I/O controllers/devices onboard because they do not have an external bus which would allow them to interface to other I/O controllers/devices. Consequently, a typical blade server must provide such

Art Unit: 2419

I/O controllers/devices as Ethernet (e.g., 10/100 and/or 1 Gb) and data storage control (e.g., SCSI, Fiber Channel, etc.)--all onboard (See Fig. 1 of Garnett et al).

Regarding claims 20-22, 24-25, Garnett further teaches in Fig. 15 a functional block diagram showing the external connectivity of the shelf in Fig. 2, in which Workload distribution management (load balancing) provides operational efficiency benefits to server systems where more than one server is utilised. Load balancing is the process of distributing new connections to a group of servers between those servers in a controlled fashion. By means of such controlled distribution of new connections, the speed of service experienced by a requesting computer can be increased. Load balancing algorithms can work in a variety of ways to attempt to distribute new connections most efficiently. The most simple load balancing algorithm is a "round robin" system whereby a load balancer allocates new connections according to a circular list of available servers. Thus a first incoming new connection is allocated to a given server and each new connection received thereafter is allocated to the next server in the list, returning to the first server when the end of the list is reached (Col. 32, lines 4 plus).

With respect to claims 4-11, they are method claims corresponding to the apparatus claims 16-22, 24-25 as discussed in paragraph above. Therefore, claims 4-11 are analyzed and rejected as previously discussed with respect to claims 16-22, 24-25.

One skilled in the art of communications would recognize the need for a load balancing in a multi server platform, and would apply Garnett's novel use of the blade server load balancing algorithm and Hsu's teaching of the link capacity utilization data into Paranchych's system and method for load balancing function. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Garnett's server

Art Unit: 2419

blade for performing load balancing functions, and Hsu's connection routing based on link utilization into Paranchych's method and apparatus for load balancing in CDMA/HDR networks with the motivation being to provide a system and method to provide blade server load balancing.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Kung et al. (US#6,570,855) shows a automatic call manager traffic gate feature.

The Yang et al. (US#2004/0024831) shows the blade server management system.

The Chen et al. (US#7,062,556) show a load balancing method in a communication.

The Kantesaria et al. (US#2006/0167886) show a system and method for transmitting data from a storage medium to a user defined cluster of local and remote server blades.

The Poortman (US#7,243,145) show a generation of computer resource utilization data per computer application.

The Alcorn et al. (US#6,988,138) show a internet based education support system and methods.

The Leung et al. (US#2004/0054656) show a techniques for balancing capacity utilization in a storage environment.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

Art Unit: 2419

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

01/14/2009

/Man Phan/

Primary Examiner, Art Unit 2419